



BSR Conference 2009

**Reset Economy. Reset World.**

## Ecoliteracy and Ecodesign with Fritjof Capra

Breakout Session Summary

Thursday, October 22, 2009 | 11 a.m.-noon

### Speakers

- » **Fritjof Capra**, Physicist, Systems Theorist, and Founding Director, Center for Ecoliteracy
- » **Laura Ediger**, Environmental Manager, BSR (moderator)

### Highlights

- » Ecosystems are natural reference points for creating sustainable systems because they have been sustaining life for billions of years. We should look to nature to understand how it has sustained life for so long and mimic these basic principles to design a sustainable society.
- » Systems thinking—and sustainability—requires a shift from a focus on objects to a focus on relationships.
- » Seeking different types of growth—such as growth in complexity or quality—is a critical element in achieving sustainability, both for companies and for societies.

### Memorable Quotes

*“A sustainable society is designed in such a way that the way of life—business, social institutions, technology—does not interfere with nature’s inherent ability to sustain life.”* —Fritjof Capra, Center for Ecoliteracy

*“Ecodesign is a design process in which our human purposes are carefully meshed with patterns and processes we observe in nature.”* —Fritjof Capra, Center for Ecoliteracy

### Overview

Ediger began by asking Capra how he defines sustainability. Capra said he is surprised by the confusion around sustainability. In the early 1980s, Lester Brown defined a sustainable society as one that can satisfy its needs and aspirations without compromising future generations. The challenge is defining how to do this. Capra explained that ecosystems serve as a natural reference point to answer this question because the Earth has been sustaining life for billions of years. “Ecoliteracy” refers to our ability to understand the basic principles that allow nature to sustain life.

The Center for Ecoliteracy began by using the ecosystems perspective as the core of an entire educational curriculum. Just as economics and technology are inherent in society, the subjects biology, chemistry, and thermodynamics are inherent in nature—making ecosystems an obvious fit for the curriculum.

“Ecodesign” refers to the idea that ecosystems should serve as a reference point for designing a more sustainable society. Capra used the concept of circular flow as an example of an ecosystems process that could be used to design a more sustainable society. In nature, matter is continuously recycled, the waste of one species becoming the food of another. In a similar vein, a sustainable economic system would be one in which the waste of one business becomes a resource for another.



Capra also cited the example of biological diversity, which assures nature's resilience. In an ecosystem where multiple species perform the same function, the system will continue even in the face of a catastrophe that wipes out an entire species. Similarly, societies designed with a focus on economic diversity will be more resilient.

Ediger then asked Capra to explain his belief that business should switch from a product-oriented focus to a service-oriented one. Ediger pointed out that, most consumers do not buy cars for the car (a product) but as a means of mobility (a service). Capra agreed and explained that systems thinking requires a shift from a focus on objects to a focus on relationships, and in this case, the relationship between the consumer and the car is mobility.

With this shift, it would be a natural progression for consumers to lease instead of buy cars, thereby paying for the service rather than the object. The benefit with this system is that manufacturers would own the products and would therefore also have the incentive to improve the efficiencies of design, production, maintenance, and retooling. They would create less hazardous products, focus on long-term utility, and seek innovative ways to reuse materials.

In reference to the car example, an audience member asked how ecosystems might shed light on how we could make such a huge mind shift. Capra replied that ownership doesn't exist in ecosystems. For example, plants and animals don't own carbon and nitrogen; rather, they "lease" these services and actually go one step further to recycle them. In many cases, they also share these leased compounds in symbiotic relationships with other plants or animals.

Ediger concluded the conversation by asking Capra to explain his concept of qualitative growth. Capra responded with a story about last year's preponderance of "bad" news. As a result of the recession, people were driving less, consuming less, and saving more. Although this was bad for society, it was better for the earth.

The critical question is how to design an alternative model that is good for the earth but also preserves economic equanimity. Growth is a fundamental element of business as well as ecosystems, but the rate of growth and the type of growth are key factors. Things grow in ecosystems, but they don't all grow at the same time. And once these growing elements reach a certain point, they begin to have "qualitative" growth, such as growth in complexity or quality. On a macro level, Capra argues, we should change the GDP to assess qualitative growth elements. On a micro level, companies should look both at which areas should grow and which should not—as well as which areas should decline. The company should also focus on promoting good growth while avoiding bad growth, such as growth in waste and toxic chemicals.

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